

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Period: \_\_\_\_\_

## Algebra 1 CP Midterm Review

Simplify.

1.)  $-4 - (2^2 - 5)^3 + 8$

2.)  $24 - \frac{3^3 - (10 + 16)}{4 \div 4}$

3.)  $\frac{42 \div 6 \cdot 2}{8 \times 2 \div 2}$

4.)  $\frac{(-3 - 1)^2 + 3 \div 3}{-16 \cdot 2 \div 8}$

5.)  $-3(5 \cdot 2 - 8)^2 + 10$

6.)  $|3 - 21| + |7|$

7.)  $5|1 - 6 + 4| - |-3|$

8.)  $-|24 \div 8 - 5| - |-6 - 2|$

For #16-20, list the classification subsets for each real number:

Natural Number (N)

Whole Number (W)

Integer (I)

Rational (Q)

Irrational (Ir)

Real (R)

16.) 9.6

17.)  $\sqrt{5}$

18.)  $\frac{-5}{9}$

19.) 4

20.) 0.121212...

For #21-24, tell which of the following properties apply:

Commutative Property of Addition

Commutative Property of Multiplication

Associative Property of Addition

Associative Property of Multiplication

Identity Property of Addition

Identity Property of Multiplication

Inverse of Addition

Inverse of Multiplication

21.)  $-4 + 4 = 0$

22.)  $9 + 2 + 7 = 7 + 2 + 9$

23.)  $1 = \frac{2}{3} \cdot \frac{3}{2}$

24.)  $x + 0 = x$

$$35.) 2 - 3x = -5(x - 6)$$

$$36.) -4x - 3 = 5(x + 3)$$

$$37.) 5m - 3(m - 3) = 3(m + 3)$$

$$38.) -2m + 5(m + 3) = -2(m - 3)$$

$$39.) x - 9 = -2(x - 1) - 2$$

$$40.) x + 1 = -4 - 6(x - 1)$$

Solve for the indicated variable.

$$41.) A = bh, \text{ for } b$$

$$42.) P = 2l + 2w, \text{ for } w$$

$$43.) y = mx + b, \text{ for } x$$

$$44.) -2x + 4y = 8, \text{ for } y$$

Solve and graph each inequality.

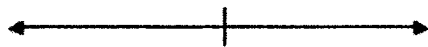
58.)  $-4 + 2x - x > 3$



60.)  $-5 - \frac{x}{4} \geq -6$



62.)  $|x - 3| > 5$



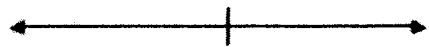
59.)  $-5x + 3 < 6 - 4x$



61.)  $0 \leq 2x + 4 \leq 12$



63.)  $|x - 2| \leq 10$



73.) Jake can read 20 pages in 1 hour. At this rate, how many hours will it take him to read 240 pages?

74.) State the Domain and Range of this relation and whether or not it is a function.

x	y
4	8
5	-1
6	3
4	9
8	3

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

Function? \_\_\_\_\_

Use the chart below to answer questions 75 and 76.

x	y
0	1
1	2
2	3
-1	4
6	5

75.) State the Domain and Range of this relation and whether or not it is a function.

Domain: \_\_\_\_\_

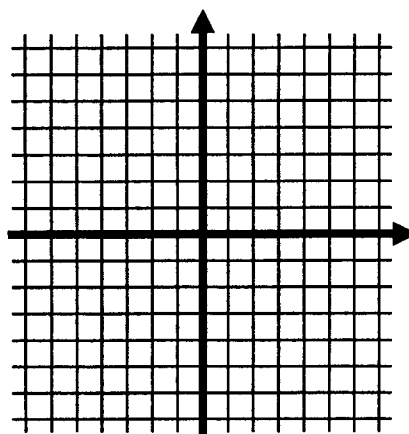
Range: \_\_\_\_\_

Function? \_\_\_\_\_

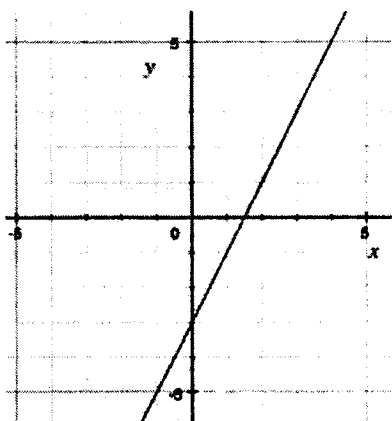
76.) List the ordered pairs of the relation.

84.) Graph the line that contains the points in the chart below.

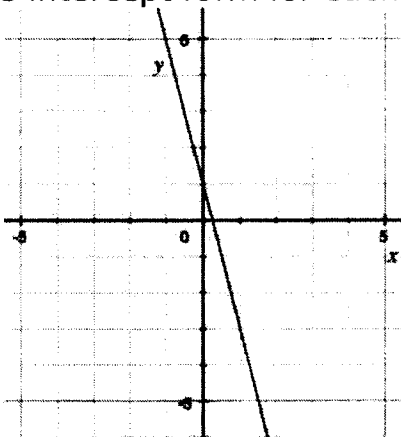
x	y
2	4
3	6
4	8
5	10



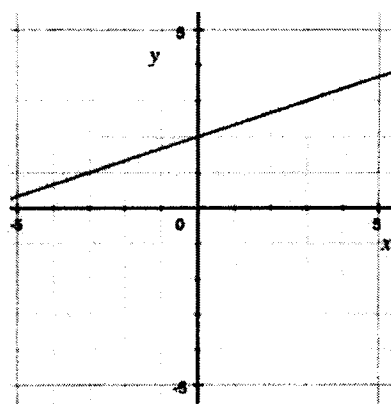
Write an equation in slope-intercept form for each graph below.



85) \_\_\_\_\_

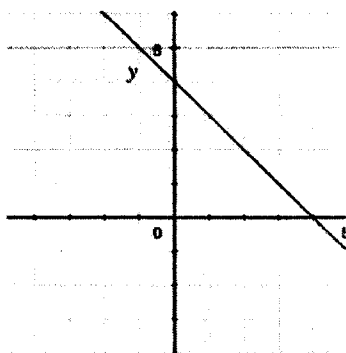


86) \_\_\_\_\_

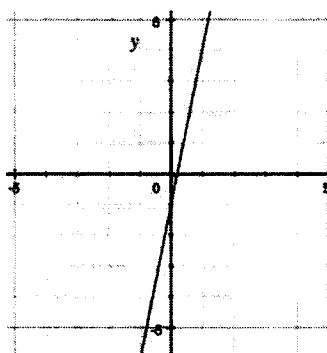


87) \_\_\_\_\_

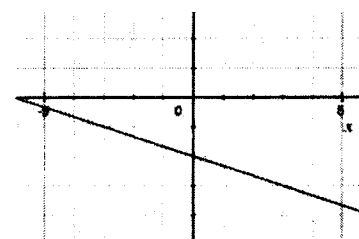
Write an equation in standard form for each graph below.



88) \_\_\_\_\_



89) \_\_\_\_\_



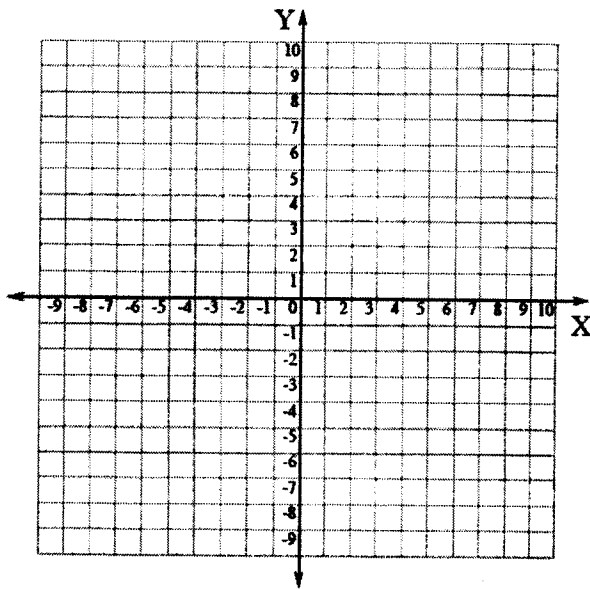
90) \_\_\_\_\_

Algebra 1  
Common Assessment #6  
REVIEW

NAME \_\_\_\_\_ DATE \_\_\_\_\_ PD \_\_\_\_\_

**Show your work and circle your answers!**

1.) Solve the system by graphing: 
$$\begin{cases} x - y = 4 \\ x + y = 6 \end{cases}$$



2.) Solve the system by substitution: 
$$\begin{cases} 8x + y = -16 \\ -3x + y = -5 \end{cases}$$

3.) Solve the system by elimination: 
$$\begin{cases} 5x + y = 9 \\ 10x - 7y = -18 \end{cases}$$

9.) Simplify:  $\frac{35a^2c}{5a^2b^9}$

10.) Write the following number in Scientific Notation: 0.0076523

11.) Multiply:  $(2 \times 10^3)(4 \times 10^{-7})$

12.) What type of polynomial has two terms?

13.) What is the degree of this monomial:  $-x^{12}y^4z^7$

14.) What is the degree of this polynomial:  $8x^9 - 7x^3 - 6x + 1$

15.) Simplify:  $6a - 4b + 11c - 7a + 4b$

16.) Simplify:  $(x + 2y - 7) - (3x + 2y - 8) - (y + 10)$

17.) Multiply:  $x^2y(x^2y + 6x + y)$



Algebra 1  
Common Assessment #6  
REVIEW

27.) Factor:  $x^2 - 64y^2$

28.) Factor:  $4x^2 - 23x - 6$

29.) Factor:  $x^2 + 16x + 64$

30.) Factor:  $x^2 + 4xy + 4y^2$

31.) Solve by Factoring:  $x^2 + x - 20 = 0$

32.) Solve by Factoring:  $x^2 - 36 = 0$

33.) Simplify:  $\sqrt{225}$

34.) Simplify:  $\sqrt{48}$

44.) Multiply:  $(5 + \sqrt{20})(3 - \sqrt{2})$

45.) Multiply:  $(\sqrt{2} + 2\sqrt{5})^2$

46.) Divide:  $\frac{\sqrt{20}}{5\sqrt{2}}$

47.) Divide:  $\frac{\sqrt{10}}{\sqrt{6}}$

48.) Solve for the missing side of a right triangle that has a hypotenuse of 20 feet and a leg of 16 feet.

49.) Solve for the hypotenuse of a right triangle that has leg lengths of 3 feet and 4 feet.

50.) Find the diagonal of a square that has a side length of 6 inches.

**58.)** The letters of the word ALGEBRA are written on index cards and placed in a brown bag. If one letter is selected at random, what is the probability that the letter drawn is an L?

**59.)** The letters of the word ALGEBRA are written on index cards and placed in a brown bag. If one letter is selected at random, what is the probability that the letter drawn is an A or a B?

**60.)** The letters of the word ALGEBRA are written on index cards and placed in a brown bag. If two letters are selected at random, what is the probability that the first letter drawn is an A and the second letter drawn is a G?